



U.S. Department  
of Transportation  
  
Research and  
Special Programs  
Administration

APR 29 1999

400 Seventh Street, S.W.  
Washington, D.C. 20590

DOT-E 8451  
(TWENTY-SECOND REVISION)

EXPIRATION DATE: January 31, 2001

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: U.S. Department of Energy  
Washington, DC

(See Appendix A to this document for a list of additional grantees)

2. PURPOSE AND LIMITATION: This exemption authorizes the transportation in commerce of not more than 25 grams of explosive or pyrotechnic material, including waste containing explosives that has energy density not significantly greater than that of pentaerythritol tetranitrate, classed as Division 1.4E, when packed in a special shipping container. This exemption provides no relief from any regulation other than as specifically stated herein.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 172.320, § 173.3, § 173.54, § 173.60, § 174.3, § 175.3., § 173.52, § 177.801.
5. BASIS: This exemption is based on the application of Department of Energy's application dated March 29, 1999, submitted in accordance with § 107.109.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous materials description -- proper shipping name	Hazard Class/ Division	Identi- fication Number	Packing Group
Articles, explosive, n.o.s. (*)	1.4E	UN0471	II

\* Technical name of material being shipped  
For the N.O.S. entries above, the requirements of § 172.302(k) must be met.

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7. SAFETY CONTROL MEASURES: Inside packaging must be:

a. A 4-inch X 14-inch Schedule 80 seamless steel pipe nipple closed at both ends with 4-inch diameter forged steel end caps, 3,000 psi per ASTM 105, or other caps which have been shown by test to contain the explosive effect of 25 grams of PETN, or

b. A 6-inch X 12 to 14-inch Schedule 80 seamless steel pipe nipple closed at both ends with 6-inch diameter malleable iron end caps with a minimum strength of 250 psi, or other caps which have been shown by test to contain the explosive effect of 25 grams of PETN.

For pipe nipples described in paragraphs a and b, the threads must be cut so that the end caps can be screwed on a minimum of 5 threads by hand, but the caps must be tightened with a wrench.

c. The device described in "Handling Procedure and Design of a Shipping Container for Transporting Small Samples of Dry Primary Explosives" by Harold K.H. Bartles, presented at the 12th Symposium of Explosives and Pyrotechnics on March 13, 1984 in San Diego, California, USA, which is attached to Schlumberger's application to modify the exemption dated July 7, 1988 and supplemental letter dated July 2, 1992.

d. The packaging identified as "Model LD-2250" described in "Shipping Containers for Small Samples of High Explosives" by Richard A. Hildner and Manual J. Urizar, Los Alamos National Laboratory Report No. LA-9107-MS/UC-71, Hercules Incorporated's application dated January 14, 1993. The packaging identified as "Model LD-1000" in this same Laboratory Report may only be used if the net mass of explosives contained within does not exceed 15 grams.

e. The energetic materials must be sealed in a leak-proof receptacle centered internally in the pipe or wrapped with cushioning material to keep the energetic material away from the side walls and ends of the capped pipe container. The devices described in paragraphs a, b, c, and d must be in a cushioned UN 4G fiberboard box, 4C wooden box, 4d plywood box, or a 4A steel box, 4B aluminum box, 4N metal (other than steel or aluminum) box, or a 1A2 removable head steel drum, 1B2 removable head aluminum drum, or 1N2 removable head metal (other than steel or aluminum) drum.

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**8. SPECIAL PROVISIONS:**

a. A person who is not a holder of this exemption who receives a package covered by this exemption may reoffer it for transportation provided no modifications or changes are made to the package and it is reoffered for transportation in conformance with this exemption and the HMR.

b. A current copy of this exemption must be maintained at each facility where the package is offered or reoffered for transportation.

c. For purposes of domestic transportation by air in accordance with § 171.11, this document also constitutes an exemption to the International Civil Aviation Organization Technical Instructions on the Safe Transport of Dangerous Goods by air in accordance with Part 1;1.1.1.

**9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, and cargo only aircraft.****10. MODAL REQUIREMENTS:**

A current copy of this exemption must be carried aboard each aircraft or motor vehicle used to transport packages covered by this exemption. The shipper must furnish a current copy of this exemption to the air carrier before or at the time the shipment is tendered.

**11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:**

- o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
- o Registration required by 49 CFR 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8 who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by §§ 172.700 through 172.704.

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No person may use or apply this exemption, including display of its number, when the exemption has expired or is otherwise no longer in effect.

12. REPORTING REQUIREMENTS: The carrier is required to report any incident involving fire, explosion or loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (Sections 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must inform the AAHMS, in writing, of any incidents involving the package and shipments made under the terms of this exemption.

Issued at Washington, D.C.:

  
for Alan I. Roberts,  
Associate Administrator  
for Hazardous Materials Safety

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(DATE)

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590.  
Attention: DHM-31.

The original of this exemption is on file at the above office. Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

Copies of exemptions may be obtained from the AAHMS, U.S. Department of Transportation, 400 7<sup>th</sup> Street, SW, Washington, DC, 20590-0001, Attention: Records Center, 202-366-5046.

Dist: FHWA, FRA, FAA  
PO: sln99

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The following are hereby granted party status to this exemption based on their application(s) submitted in accordance with § 107.107 or § 107.109, as appropriate:

Company Name City/State	Applica- tion Date	Issue Date	Expiration Date
AAI Corporation Hunt Valley, MD	Dec 30, 1998	Feb 9, 1999	Jan 31, 2001
Accurate Arms Company, Inc., McEwen, TN	Jan 19, 1999	Feb 9, 1999	Jan 31, 2001
Accurate Energetic Systems LLC, McEwen, TN	Jan 19, 1999	Feb 9, 1999	Jan 31, 2001
Action Manufacturing Company (Action) Philadelphia, PA	Dec 12, 1997	Dec 16, 1997	Jun 30, 1999
Advanced Environmental Technology Corporation Flanders, NJ	Mar 30, 1999	Apr 8, 1999	Jan 31, 2001
Advanced Environmental Technical Services, (AETS) Flanders, NJ	Aug 29, 1997	Sep 15, 1997	Jun 30, 1999
Alliant Techsystems, Inc. a Delaware Corporation Hopkins, MN	Apr 26, 1999	APR 29 1999	Jan 31, 2001
Alliant Precision Fuze Company LLC, Janesville, WI	Apr 26, 1999	APR 29 1999	Jan 31, 2001
Alliant Ammunition & Powder Company, LLC, Radford, VA	Apr 26, 1999	APR 29 1999	Jan 31, 2001
Alliant Convention Munitions LLC, Hopkins, MN	Apr 26, 1999	APR 29 1999	Jan 31, 2001
Alliant International Holdings Inc. Hopkins, MN	Apr 26, 1999	APR 29 1999	Jan 31, 2001
Alliant Integrated Defense Company LLC, Hopkins, MN	Apr 26, 1999	APR 29 1999	Jan 31, 2001

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Company Name City/State	Applica- tion Date	Issue Date	Expiration Date
Alliant Defense Electronic Systems, Inc. A Minnesota Corporation Hopkins, MN	Apr 26, 1999	APR 29 1999	Jan 31, 2001
Alliant Power Sources Company LLC, Horsham, PA	Apr 26, 1999	APR 29 1999	Jan 31, 2001
Alliant Holdings LLC Hopkins, MN	Apr 26, 1999	APR 29 1999	Jan 31, 2001
Alliant Southern Composites Company LLC, Iuka, MS	Apr 26, 1999	APR 29 1999	Jan 31, 2001
Alliant Defense Systems LLC Hopkins, MN	Apr 26, 1999	APR 29 1999	Jan 31, 2001
Alliant Aerospace Company LLC, Magna, UT	Apr 26, 1999	APR 29 1999	Jan 31, 2001
Alliant Kilgore Flares Company LLC, Toone, TN	Apr 26, 1999	APR 29 1999	Jan 31, 2001
Alliant Missile Product Company LLC Rocket Center, WV	Apr 26, 1999	APR 29 1999	Jan 31, 2001
Alliant Space & Strategic Propulsion & Composites Company, Magna, UT	Apr 26, 1999	APR 29 1999	Jan 31, 2001
Allied-Signal, Inc. Morristown, NJ	Feb 12, 1999	Feb 24, 1999	Jan 31, 2001
American Ordnance LLC Middletown, IA	Nov 16, 1998	Dec 30, 1998	Jun 30, 1999
American Radiolabeled Chemicals, Inc., St. Louis, MO	Sep 28, 1998	Dec 30, 1998	Jun 30, 1999
American Ordnance LLC (Formerly: Mason & Hanger Corporation), Middletown, IA	Nov 16, 1998	Sep 15, 1997	Jun 30, 1999

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Company Name City/State	Applica- tion Date	Issue Date	Expiration Date
Applied Research Associates, Inc. Littleton, CO	Nov 12, 1997	Nov 20, 1997	Jun 30, 1999
Applied Energy Technology Corporation, Tempe, AZ	Feb 4, 1999	Feb 24, 1999	Jan 31, 2001
Arch Chemicals, Inc. Norwalk, CT	Apr 9, 1999	APR 29 1999	Jan 31, 2001
Atlantic Research Corporation, Gainesville, VA	Apr 6, 1999	Apr 8, 1999	Jan 31, 2001
Austin Powder Company Cleveland, OH	Apr 12, 1999	APR 29 1999	Jan 31, 2001
Autoliv ASP, Inc. (Formerly: Morton International), Ogden, UT	Mar 22, 1999	Apr 8, 1999	Jan 31, 2001
Automotive Systems Laboratory, Inc. Armada, MI	Nov 14, 1997	Nov 20, 1997	Jun 30, 1999
Automotive Systems, Laboratory, Inc. Farmington Hill, MI	Nov 14, 1997	Nov 20, 1997	Jun 30, 1999
Babcock & Wilcox of Ohio, Inc. Miamisburg, OH	Aug 11, 1998	Sep 22, 1998	Jun 30, 1999
BAICO Inflator Company Knoxville, TN	Dec 15, 1997	Jan 9, 1998	Jun 30, 1999
Baker Atlas (Formerly: Western Atlas International, Inc.), Houston, TX	Mar 16, 1999	Apr 8, 1999	Jan 31, 2001
Battelle Columbus Operations Columbus, OH	Apr 10, 1999	APR 29 1999	Jan 31, 2001
Bechtel Jacobs Company, LLC Oak Ridge, TN	May 27, 1998	Jun 18, 1998	Jun 30, 1999

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Company Name City/State	Applica- tion Date	Issue Date	Expiration Date
Boeing North American, Inc. ( Formerly: Rockwell International Corporation) Canoga Park, CA	Oct 6, 1997	Oct 28, 1997	Jun 30, 1999
Breed Technologies, Inc. Lakeland, FL	Mar 31, 1999	Apr 8, 1999	Jan 31, 2001
Bulova Technologies, LLC Lancaster, PA	Jan 15, 1998	Feb 12, 1998	Jun 30, 1999
Burns & Roe Services Corporation, Golden, CO	Nov 16, 1998	Dec 30, 1998	Jun 30, 1999
Cambridge Isotope Laboratories Andover, MA	10/29/98 & 11/4/98	Dec 30, 1998	Jun 30, 1999
Cartridge Actuated Devices, Incorporated Bryam, NJ	Nov 12, 1997	Nov 20, 1997	Jun 30, 1999
Cartridge Actuated Devices, Inc., Fairfield, NJ	Nov 12, 1997	Nov 20, 1997	Jun 30, 1999
Chemical Waste Management, Inc., Midwest Transportation Division, Sauget, IL	Feb 16, 1999	Apr 8, 1999	Jan 31, 2001
Concurrent Technologies Corp. (CTC) Johnstown, PA	Sep 2, 1998	Oct 26, 1998	Jun 30, 1999
Copperhead Chemical Co., Inc. , Tamaqua, PA	Oct 15, 1997	Feb 12, 1998	Jun 30, 1999
Daveyfire, Incorporated Sacramento, CA	Jun 13, 1997	Jul 25, 1997	Jun 30, 1999
Day & Zimmerman, Inc Texarkana, TX	Apr 26, 1999	APR 29 1999	Jan 31, 2001
Day & Zimmermann, Inc. Parsons, KS	Feb 10, 1999	Feb 24, 1999	Jan 31, 2001
Dayron Orlando, FL	Apr 20, 1999	APR 29 1999	Jan 31, 2001



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Donovan Demolition Inc. Nortonville, KY	Dec 2, 1997	Dec 16, 1997	Jun 30, 1999
DynCorp of Colorado, Inc. Golden, CO	Sep 8, 1997	Oct 28, 1997	Jun 30, 1999
Dyno Nobel Midwest (Formerly: ECONEX Inc.) Pittsfield, IL	Sep 22, 1997	Oct 28, 1997	Jun 30, 1999
Dyno Nobel, Inc. Salt Lake City, UT	Mar 22, 1999	4/8/99	Jan 31, 2001
Eagle-Picher Technologies, LLC, Joplin MI	Feb 5, 1999	Feb 9, 1999	Jan 31, 2001
Eastman Kodak Company Rochester, NY	Jun 24, 1998	Jul 21, 1998	Jun 30, 1999
EG&G Optoelectronics (Formerly: EG&G Star City, Inc. ) Miamisburg, OH	Mar 16, 1999	Apr 8, 1999	Jan 31, 2001
Electronics Development Corporation, Columbia, MD	Aug 11, 1997	Aug 22, 1997	Jun 30, 1999
Energetic Solutions Inc. Dallas, TX	Apr 15, 1999	APR 29 1999	Jan 31, 2001
Ensign-Bickford Company Simsbury, CT	Mar 31, 1999	Apr 8, 1999	Jan 31, 2001
Ethyl Corporation Richmond, VA	Sep 12, 1997	Oct 28, 1997	Jun 30, 1999
Explo Powder, Inc. Bronx, NY	May 6, 1997	Jul 25, 1997	Jun 30, 1999
Federal Aviation Administration (FAA), Aviation Security R&D Division (AAR-500), Atlantic City, NJ	Jan 8, 1998	Jan 9, 1998	Jun 30, 1999
GenCorp Aerojet Sacramento, CA	Mar 22, 1999	Apr 8, 1999	Jan 31, 2001

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Company Name City/State	Applica- tion Date	Issue Date	Expiration Date
General Electric Aircraft Engines, Cincinnati, OH	Jan 19, 1999	Feb 24, 1999	Jan 31, 2001
General Dynamics Armament Systems Burlington, VT	Mar 18, 1999	Apr 8, 1999	Jan 31, 2001
GOEX International, Inc., Simsbury, CT	Apr 27, 1998	May 13, 1998	Jun 30, 1999
GOEX International, Inc. Cleburne, TX	Apr 9, 1999	APR 29 1999	Jan 31, 2001
GOEX International, Inc., Odessa, TX	Apr 27, 1998	May 13, 1998	Jun 30, 1999
Halliburton Energy Services Duncan, OK	Dec 17, 1997	Jan 9, 1998	Jun 30, 1999
Hanley Industries, Inc Alton, IL	Mar 12, 1999	Apr 8, 1999	Jan 31, 2001
Hercules, Inc. Wilmington, DE	Mar 9, 1999	Apr 8, 1999	Jan 31, 2001
Hi-Shear Technology Corporation, Torrance, CA	Jan 20, 1999	Feb 9, 1999	Jan 31, 2001
Hitech, Inc. East Camden, AR	Apr 23, 1999	APR 29 1999	Jan 31, 2001
Hughes Defense Communication (Formerly: Magnavox Electronics Systems Company) Fort Wayne, IN	Dec 6, 1997	Dec 16, 1997	Jun 30, 1999
ICI Explosives USA Inc. Dallas, TX	Sep 3, 1997	Sep 15, 1997	Jun 30, 1999
ICI Explosives Environmental Company Valley Forge, PA	Oct 1, 1997	Oct 28, 1997	Jun 30, 1999
ICI Explosives Middletown, IA	Jan 2, 1998	Mar 10, 1998	Jun 30, 1999
ICI Explosives Environmental Company, Joplin, MO	Apr 14, 1999	APR 29 1999	Jan 31, 2001

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Company Name City/State	Applica- tion Date	Issue Date	Expiration Date
Inflation Systems Inc. LaGrange, GA	Nov 14, 1997	Nov 20, 1997	Jun 30, 1999
Inflation Systems Inc. (Formerly: Takata Moses Lake, Inc.), Moses Lake, WA	Apr 8, 1999	APR 29 1999	Jan 31, 2001
Kaman Aerospace Corporation, Raymond Engineering Operations (Formerly: Raymond Engineering, Inc.) Middletown, CT	Apr 14, 1999	APR 29 1999	Jan 31, 2001
KDI Precision Products, Inc. Cincinnati, OH	Mar 15, 1999	Apr 8, 1999	Jan 31, 2001
Lawrence Livermore National Laboratory Livermore, CA	Apr 9, 1999	APR 29 1999	Jan 31, 2001
Lockheed Martin Energy Systems (LMES) Oak Ridge, TN	Dec 4, 1997	Dec 16, 1997	Jun 30, 1999
Lockheed Missiles & Space Company, Sunnyvale, CA	Feb 3, 1999	Mar 15, 1999	Jan 31, 2001
Lockheed Martin Vought Systems Corporation Dallas, TX	Apr 1, 1999	APR 29 1999	Jan 31, 2001
Lockheed Martin Energy Research Corporation (LMER) Oak Ridge, TN	Dec 4, 1997	Dec 16, 1997	Jun 30, 1999
Lockheed Martin Idaho Technologies Company Idaho Falls, ID	Feb 9, 1998	Mar 10, 1998	Jun 30, 1999
Lockheed Martin Electronics & Missiles Orlando, FL	Apr 7, 1999	Apr 8, 1999	Jan 31, 2001
Los Alamos National Laboratory Los Alamos, NM	Mar 31, 1999	Apr 8, 1999	Jan 31, 2001

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MacKenzie Corporation Bush, LA	Dec 30, 1997	Jan 9, 1998	Jun 30, 1999
Mallinckrodt Baker Inc. (Formerly J. T. Baker Inc), Phillipsburg, NJ	Feb 19, 1999	Mar 15, 1999	Jan 31, 2001
Mariconi Aerospace Defense Systems, Inc. (Formerly: Tracor Aerospace, Inc.) San Ramon, CA	Feb 17, 1999	Mar 15, 1999	Jan 31, 2001
Martin Electronics, Inc. Perry, FL	Mar 29, 1999	Apr 8, 1999	Jan 31, 2001
Mason & Hanger Corporation Amarillo, TX	Sep 4, 1997	Sep 15, 1997	Jun 30, 1999
Mecano Tech, Inc. Kenney, TX	Apr 19, 1999	APR 29 1999	Jan 31, 2001
Midwest Transport, Inc. Menomonee Falls, WI	Feb 4, 1998	Mar 10, 1998	Jun 30, 1999
Motorola, Inc. Scottsdale, AZ	Sep 25, 1997	Oct 28, 1997	Jun 30, 1999
MP Associates, Inc. Ione, CA	Jun 13, 1997	Jul 25, 1997	Jun 30, 1999
National Aeronautics & Space Administration, (NASA), Washington, D.C.	Feb 23, 1999	Mar 15, 1999	Jan 31, 2001
New River Energetic, Inc. Radford, VA	Apr 26, 1999	APR 29 1999	Jan 31, 2001
Northrop Grumman Electronics & Systems Integration Division Hawthorne, CA	Nov 26, 1997	Mar 10, 1998	Jun 30, 1999
Northrop Grumman Corporation Electronic Sensors & Systems Division, Huntsville, AL	Mar 24, 1999	Apr 8, 1999	Jan 31, 2001

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O'Brien Design Associates, Inc., Charlestown, RI	Sep 4, 1997	Oct 28, 1997	Jun 30, 1999
OEA, Inc., Denver, CO	Aug 15, 1997	Jul 25, 1997	Jun 30, 1999
OEA Aerospace, Inc. (Formerly: ET, Inc.) Fairfield, CA	Mar 3, 1999	Mar 15, 1999	Jan 31, 2001
Olin Brass & Winchester, Inc., East Alton, IL	Feb 24, 1998	Mar 10, 1998	Jun 30, 1999
Olin Corporation Norwalk, CT	Apr 26, 1999		Jan 31, 2001
Organic Technology, Inc. Ft. Worth, TX	Mar 31, 1999	Apr 8, 1999	Jan 31, 2001
Owen Oil Tools Inc. Ft. Worth, TX	Mar 30, 1999	Apr 8, 1999	Jan 31, 2001
Pacific Scientific Chandler, AZ	Sep 9, 1997	Oct 28, 1997	Jun 30, 1999
Pacific Northwest National Laboratory, Richland, WA.	Mar 2, 1999	Mar 15, 1999	Jan 31, 2001
Primex Physics International Company, d/b/a/ Primex Technologies, Ordnance & Tactical System Division, Tracy, CA	Sep 18, 1997	Oct 28, 1997	Jun 30, 1999
Primex Technologies, Ordnance and Tactical Systems Division, St. Petersburg, FL	Apr 27, 1999	APR 29 1999	Jan 31, 2001
Primex Technologies, Inc. St. Petersburg, FL	Apr 9, 1999	APR 29 1999	Jan 31, 2001
Primex Aerospace Company Redmond, WA	Apr 9, 1999	APR 29 1999	Jan 31, 2001
Princeton Combustion Research Laboratories Monmouth Junction, NY	Mar 18, 1999	Apr 8, 1999	Jan 31, 2001

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PyroLabs, Inc. Whitewater, CO	Dec 30, 1998	Feb 9, 1999	Jan 31, 2001
Pyrotechnic Specialties, Inc., Bryon, GA	Apr 20, 1999	APR 29 1999	Jan 31, 2001
Quantic Industries, Inc. Hollister, CA	Oct 1, 1997	Oct 28, 1997	Jun 30, 1999
R&R Trucking, Incorporated Duenweg, MO	Nov 4, 1998	Dec 30, 1998	Jun 30, 1999
Radian International LLC Austin, TX	Jan 20, 1999	Mar 15, 1999	Jan 31, 2001
Raytheon Systems Co. Forth Wayne, IN	Mar 25, 1998	Apr 17, 1998	Jun 30, 1999
Reactives Management Corporation Chesapeake, VA	Nov 12, 1997	Nov 20, 1997	Jun 30, 1999
Remington Arms Company, Inc., Madison, NC	Mar 11, 1999	Apr 8, 1999	Jan 31, 2001
Reynolds Industries Systems, Inc. (RISI) San Ramon, CA	Mar 2, 1999	Mar 15, 1999	Jan 31, 2001
Royal Ordnance North America, Inc. Holston Army Ammunitions Plant Kingsport, TN	Feb 12, 1999	Feb 24, 1999	Jan 31, 2001
Sandia National Laboratories Albuquerque, NM	Feb 1, 1999	Feb 24, 1999	Jan 31, 2001
Sandia National Laboratories Livermore, CA	Feb 3, 1999	Feb 24, 1999	Jan 31, 2001
Schlumberger Well Service Rosharon, TX	Mar 11, 1999	Apr 8, 1999	Jan 31, 2001
Sippican, Inc. Marion, MA	Mar 12, 1999	Apr 8, 1999	Jan 31, 2001

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Special Devices, Inc. Newhill, CA	Apr 13, 1999	APR 29 1999	Jan 31, 2001
SRI International Menlo, CA	Apr 1, 1999	Apr 8, 1999	Jan 31, 2001
Stresau Laboratory, Inc. Spooner, WI	Apr 6, 1999	APR 29 1999	Jan 31, 2001
Talley Defense Systems, Inc., Mesa, AZ	Aug 30, 1997	Sep 15, 1997	Jun 30, 1999
Technical Ordnance, Inc. St. Bonifacius, MN	Mar 10, 1999	Apr 8, 1999	Jan 31, 2001
Teledyne Ryan Aeronautical McCormick Selph Ordnance (formerly McCormick Selph) Hollister, CA	Mar 15, 1999	Apr 8, 1999	Jan 31, 2001
The Accurate Energetic Systems LLC, McEwen, TN	Oct 27, 1997	Jan 9, 1998	Jun 30, 1999
The Boeing Company Seattle, WA	Aug 1, 1997	Aug 22, 1997	Jun 30, 1999
Thiokol Propulsion A Division of Cordant Technologies Inc. Brigham City, UT	Mar 8, 1999	Mar 15, 1999	Jan 31, 2001
Thiokol Corporation Brigham City, UT	Dec 12, 1997	Dec 16, 1997	Jun 30, 1999
TPL, Inc. Ft Wingate Army Depot Ft. Wingate, NM	Jan 7, 1999	Feb 9, 1999	Jan 31, 2001
TPL, Inc. Albuquerque, NM	Jan 7, 1999	Feb 9, 1999	Jan 31, 2001
Tracor Aerospace, Inc. East Camden, AR	Sep 25, 1997	Oct 28, 1997	Jun 30, 1999

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Company Name City/State	Applica- tion Date	Issue Date	Expiration Date
Tri-State Motor Transit, Inc. Joplin, MO	Jan 12, 1999	Feb 9, 1999	Jan 31, 2001
TRW Vehicle Safety Systems, Inc. Washington, MI	Nov 10, 1997	Nov 20, 1997	Jun 30, 1999
United Technologies Chemicals Systems San Jose, CA	Oct 1, 1997	Nov 20, 1997	Jun 30, 1999
United States Department of Defense Falls Church, VA	Apr 21, 1999	APR 29 1999	Jan 31, 2001
Universal Propulsion Company, Phoenix, AZ	Feb 16, 1999	Feb 24, 1999	Jan 31, 2001
University of Illinois at Urbana-Champaign, Urbana, IL	Jan 21, 1998	Feb 12, 1998	Jun 30, 1999
US DOT Research & Specials Programs Administration (RSPA) Office of Hazardous Materials Enforcement Washington, DC	Sep 29, 1998	Sep 30, 1998	Jun 30, 1999
UXB International, Inc. Ashburn, VA	Aug 29, 1997	Oct 28, 1997	Jun 30, 1999
Washington State University Pullman, WA	Apr 19, 1999	APR 29 1999	Jan 31, 2001